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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,133	11/29/2001	Guy Alan L'Heureux	115.0005	3398
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PRIEST & GOLDSTEIN PLLC 5015 SOUTHPARK DRIVE SUITE 230 DURHAM, NC 27713-7736			EXAMINER PANNALA, SATHYANARAYA R	
			ART UNIT 2167	PAPER NUMBER

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/997,133	Applicant(s) L'HEUREUX, GUY ALAN	
	Examiner Sathyanarayan Pannala	Art Unit 2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's Amendment filed on 7/15/2004 has been entered with claims 1 and 12 being amended. Claims 1-22 are pending in this Office Action.

Drawings

2. The drawings filed on 7/15/2004 were received. These drawings of Figs. 2I-J, 2L-O AND 2R are accepted by the Examiner.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 12 contain the statement as "said determined volumes". Examiner is not clear about it and more clarification is needed or an appropriate claim correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

"A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made."

6. Claims 1, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray et al. (US Patent 6,622,142) hereinafter Murray and in view of Koeppen (US Patent 5,761,667) hereinafter Koeppen.

7. As per the independent claims 1, 12, Murray teaches a system for rapid unloading and reorganization of hierarchical databases. Murray teaches as the unloading segments to an external file includes calculation of the RBA for the segment before it is reloaded into the new data set (col. 4, lines 15-26). Murray teaches the claimed step of "monitoring in normal processing system operation an order of storing a large physical sequential data file, which is an IMS OSAM dataset, spanning multiple disk storage volumes to multiple logical devices, each of which has an allocatable volume" the control region accepts messages form terminals and builds transaction and queues messages. It logs all message database activity and manages database buffers and usage (Fig. 1, col. 6, lines 2-6). Further, Murray teaches the claimed step of "analyzing the large physical sequential data file to determine a volume of storage

space of said file stored in the allocatable volume of each of the multiple logical devices” the blocks are moved into a data space having a large addressing range which as and IMS data set can reach up to 8 GB (Fig. 3, col. 6, lines 27-37). Further, Murray teaches the claimed step of “adjusting the storage space measure to full on an allocatable volume when the volume of storage space of said file exceeds the allocatable volume space on a logic device” as the determination of free space in a block (examiner considered similar to volume) during the unload process uses a counter representative of the capacity of each block in the data space. As the segment is unloaded from a selected block, the counter indicates the amount of space in the block is increased and when the block is entirely free space, the counter will indicate the block capacity (Fig. 3, col. 7, lines 48-55). Finally, Koeppen teaches the claimed step of “determining if the total space exceeds a predetermined threshold which is a percentage of the total allocatable volumes of said multiple logical devices” the IMS file can reach approximately 8 billion bytes in size (col. 6, lines 34-35). Murray do teaches the block size needed to reload the segment but does not teach explicitly size of the database. However, Koeppen teaches the claimed step of “determining a total space stored for the large physical sequential data file from said determined volumes” the header data structure contains the size of the database and the key structure (Fig. 3a-c, col. 3, lines 36-43). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate checking of database size. Murray teaches reorganizing the IMS files in order to store the files in sequence for faster access whereas Koeppen teaches reorganizing files by off loading IMS files using multiple tape drives. The two

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references are combined to relate determination of the IMS database size. In order to improve the system performance, tuning the database by the system administrator uses the one of the factor as the size of the database col. 1, lines 17-26).

8. Claims 2-5, 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray et al. (US Patent 6,622,142) hereinafter Murray and in view of Koeppen (US Patent 5,761,667) hereinafter Koeppen and further in view of Coy et al (US Patent 5,644,766) hereinafter Coy.

9. As per dependent claims 2, 13, Murray and koeppen does not teach reporting the storage space occupied and available. However, Coy teaches the claimed step of "the step of generating an exception report to inform a user that the total volume exceeds the predetermined threshold" the report to the client what space is occupied and the existing modules so that they can be compressed or remove from the store to accommodate (col. 11, lines 14-21). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate checking of database size. Murray teaches reorganizing the IMS files in order to store the files in sequence for faster access. Koeppen teaches reorganizing files by off loading IMS files using multiple tape drives. Whereas Coy also teaches a method for preserving special and temporal locality of sets of related objects when moving the sets within a storage hierarchy via a common server. The three references are combined to incorporate the reporting to client whenever the free space is less that the requested. In order for the client to request to reduce the database size, reporting is necessary to know the current space utilized by the database.

10. As per dependent claims 3, 14, Coy teaches the claimed step of “the step of automatically emailing the exception report to the user” (examiner interprets that the reporting could be an email) (col. 11, lines 14-21).

11. As per dependent claims 4, 15, Coy teaches the claimed step of “the step of: reducing the size of the large physical sequential data file” the server first determines if the number of archival media instances can be reduced and then when possible, reduces the number of archival media instances (col. 11, lines 14-21).

12. As per dependent claims 5, 16, Coy teaches the claimed step of “the IMS OSAM dataset is guaranteed space and the multiple logical devices are a plurality of disk memory storage devices” the object placement management system locates media instances in a lower level of the storage hierarchy for a logical cluster by first attempting to find the set of media instances that already contain the logical clusters (Fig. 4, col. 8, lines 42-50).

13. Claims 6, 8-11, 17, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray et al. (US Patent 6,622,142) hereinafter Murray, in view of Koeppen (US Patent 5,761,667) hereinafter Koeppen, in view of Coy et al (US Patent 5,644,766) hereinafter Coy, and further in view of Pastilha et al (US Patent 5,678,044) hereinafter Pastilha.

14. As per dependent claims 6, 17, Pastilha teaches the claimed step of “step of analyzing the large physical sequential data file further comprises: performing an IDCAMS LISTCAT against the data file to determine if the data file is guaranteed space” LISTCAT is a control statement directs the operation of IBM utility named as IDCAMS to

provide the requested item (Fig. 1, col. 6, lines 18-21). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate LISTCAT control statement to provide the requested item to the client. In order to provide the requested information control statement are easier to use rather than writing a series of Job control language instructions.

15. As per dependent claims 8, 19, Pastilha teaches the claimed step of "step of monitoring further comprises: performing a SUBLISTC routine for the dataset and returning a gts flag, last volume, total number of volumes, and a predetermined number of occurrences of volume serial numbers for the dataset" SUBLISTC is another command" SUBLISTC is a command similar to LISTCAT is a control statement directs the operation of IBM utility named as IDCAMS to provide the requested item (Fig. 1, col. 6, lines 18-21).

16. As per dependent claims 9, 20, Pastilha teaches the claimed step of "step of monitoring further comprises: reading an output from the SUBLISTC routine and returning gts flag and last volume information" SUBLISTC is another command" SUBLISTC is a command similar to LISTCAT is a control statement directs the operation of IBM utility named as IDCAMS to provide the requested item (Fig. 1, col. 6, lines 18-21).

17. As per dependent claims 10, 21, Pastilha teaches the claimed step of "the step of: executing an IEHLISTR routine" IEHLISTR is a utility command similar to DCOLECT as sated in the specification and it deals with files. This command requests information

form files system concerning actual volume where data set resides. (Fig. 1, col. 6, lines 34-43).

18. As per dependent claims 11, 22, Pastilha teaches the claimed step of "the steps of: reading an output from the IEHLISTR subroutine; and returning total free cylinder information" IEHLISTR is a utility command similar to DCOLECT as sated in the specification and it deals with files. This command requests information form files system concerning actual volume where data set resides. (Fig. 1, col. 6, lines 34-43).

19. Claims 7, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray et al. (US Patent 6,622,142) hereinafter Murray and in view of Koeppen (US Patent 5,761,667) hereinafter Koeppen, and in view of Coy et al (US Patent 5,644,766) hereinafter Coy and further in view of Donovan et al (6,012,032) hereinafter Donovan.

20. As per dependent claims 7, 18, Donovan teaches the claimed step of "step of analyzing the large physical sequential data file further comprises: executing a DCOLLECT utility against a volume table of contents on each of said disks to extract information about the physical file stored on each disk" IDCAMS and DCOLLECT are utility programs of IBM and cannot be claimed, For example, Dcollect D record, a VOTC scan record process flow is shown. VOTC is a table on DASD describing each data set on the volume (Fig. 7, col. 7, lines 27-40). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate listing of Volume of table. In order to list the DASD information the utility control statements like DCOLLECT are easier and simpler to use.

Response to Arguments

21. The Applicant's arguments filed on 7/15/2004 have been fully considered but they are not persuasive and details as follows:

a) Applicant's argument states as "the tools known to the inventor at the time of the invention were not able to reliably provide accurate capacity information for very large databases during normal system operations."

In response to the Applicant's argument, Examiner respectfully disagrees because the inventor knowledge is the criteria of the patentability and it is decided based on the prior art existence.

b) Applicant's argument states as "Murray's data reading and movement of data blocks is part of a database reorganization operation. Such a reorganization would appear to be an impractical approach to monitoring of a large database space on an ongoing basis."

In response to the Applicant's argument, Examiner again respectfully disagrees because there are several factors involved in reorganization process like how frequently the database records are updated, added and deleted. The applicant considered the database size as 8GB is considerably not very large.

In response to the Applicant's other arguments, the In response to Applicant's other prior art argument that Murray reorganization of Murray with the database reorganization system of Koeppen, a new database reorganization system could result, a recitation of the intended use of the claimed invention

must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

In response to Applicant's arguments further fails to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Conclusion

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sathyanarayan Pannala whose telephone number is (571) 272-4115. The examiner can normally be reached on 8:00 am - 5:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sathyanarayan Pannala
Examiner
Art Unit 2167

srp
January 5, 2005


GEETA ROBINSON
PRIMARY EXAMINER